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ABSTRACT

This report examines the 1984 library and information science literature in order to characterize, analyze, and evaluate the published research of the field. The subjects and methods of research, types of libraries studied, and analytical techniques used are examined; a "core" journal group of 91 sources is established; and the amount and type of research published in the core are analyzed. Findings are presented for the characteristics of library and information science journals and articles and for the field of information science, and current research results are compared with those obtained in earlier studies. It is concluded that the range of subjects and types of libraries studied is wide, and that research is heavily concentrated in the historical, survey, and observation and description methods, with descriptive analytical techniques predominating over techniques that are predictive or inferential. Data are illustrated in 27 tables and 15 figures, and a bibliography is provided. (KM)

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LIBRARY AND INFORMATION SCIENCE RESEARCH:

AN ANALYSIS OF THE 1984 CORE JOURNAL LITERATURE

Pat Feehan
Lee Gragg
Mike Havener
Diane Kester

LIBS 302
December 6, 1985

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INTRODUCTION

The subject concerns of a discipline are nowhere better reflected than in its research literature. The topics which practitioners of a field of study address and the manner in which those topics are studied reflects the basic organization, interests, and maturity of the field. As a discipline matures, it gradually develops a body of literature large enough to be subjected to meaningful study. In recent years, the literature of library and information science has become established enough to be seriously analyzed.

We undertook such an analysis of the 1984 library and information science literature in order to characterize, analyze, and evaluate the published research of our field. We studied the subjects of research, the methods employed in this research, the types of libraries studied, and the analytical techniques used. Since most research in library science, as in other fields, is published in the journal literature, we sought to establish a "core" journal group and then to evaluate the amount and types of research published in that core.

We were not the first to address the question of what characterizes library and information science research. Three earlier studies are directly relevant to our work. Peritz (1977), Nour (1981), and Eaton and Burgin (1984) all examined research in earlier core journal literature. The earliest of these studies, Peritz, also covered the longest time period, examining the

evolution of library research from 1950 through 1975. The following four characteristics of research papers were examined by Peritz: methodology used, type of library (or other organization) investigated, operations or activity investigated, and the type of institution to which the author was affiliated. Nour and Eaton and Burgin modelled their studies on Peritz but varied in their methods of determining core journals and in the types of analysis which they employed. In the results section of this paper, we will compare our findings with these earlier studies to the extent possible.

DEFINITIONS, METHODS, AND PROCEDURES OF THE STUDY

Identification of Core Library Journals

In order to survey the 1984 library and information science journal literature, a decision had to be made as to which journals to include in the study. Earlier studies of journal literature in this field (Peritz, Nour, and Eaton and Burgin) all used coverage by bibliographic indexes as the criterion for identifying core journals. We followed the same method both because this makes our results more comparable with earlier studies and because articles in widely indexed journals are more likely to be accessible to library practitioners and educators.

Core journals of 1984 were determined by comparing the lists of journals indexed in Library Literature, Library and Information Science Abstracts, and Social Science Citation Index for overlap. Any journal indexed in two of these three sources was included in our core. Nour used exactly the same method to

identify her core journals (Nour, pp. 12-13). Eaton and Burgin also checked the journal list for Science Citation Index but added only one journal to their core as a result of this addition (Eaton and Burgin, pp. 2-3). Peritz's core consisted of journals indexed in Social Science Citation Index and in at least four of the five indexes: Information Science Abstracts, Abstract Journal: Informatics, Library and Information Science Abstracts, Library Literature, and Current Awareness - Library Literature(Peritz, p. 40).

We excluded from our study foreign language journals and journals published outside of North America or Europe since such journals are less accessible to American librarians and therefore less likely to influence American theory or practice. These exclusions resulted in an identified core of 94 journals. Three titles (Computer Equipment Review, Computer Journal, and Computing) were removed from the core because 1984 issues of those journals were not readily available to us. This left us with a core of 91 journals (See Table 1).

Table 2 shows index coverage of our 91 core journals. All core journals were indexed by Library Literature, and 90 of 91 were indexed by LISA. Journal of Chemical Information and Computer Science, the only core journal not indexed by LISA, was covered by Library Literature and Social Science Citation Index. Thirty-two journals received indexing coverage in all three of these tools.

Table 1

CORE JOURNALS USED IN STUDY
(COMPLETE TITLES)

Journal Number	Title
01	American Archivist
02	American Libraries
03	ASIS (Journal of the Am Soc for Information Science)
04	Art Libraries Journal
05	ASLIB Proceedings
06	Audiovisual Librarian
07	Behavioral and Social Sciences Librarian
08	CLIC Quarterly (Citizens Lib Counc of New York State)
09	Canadian Library Journal
10	Cataloging and Classification Quarterly
11	Catalogue and Index
12	Catholic Library World
13	Collection Building
14	Collection Management
15	College and Research Libraries
16	College and Research Libraries News
17	Colorado Libraries
18	Database
19	Drexel Library Quarterly
20	Emergency Librarian
21	Fontes Artis Musicae
22	Government Publications Review
23	IFLA Journal
24	INSPEL
25	Indexer, The
26	Information Processing and Management
27	Information Technology & Libraries
28	Interlending & Document Supply
29	International Cataloging
30	International Classification
31	International Forum on Information & Documentation
32	International Library Review
33	Journal of Academic Librarianship
34	Journal of Chemical Information & Computer Science
35	Journal of Documentation
36	Journal of Education for Librarianship
37	Journal of Information & Image Management
38	Journal of Information Science
39	Journal of Librarianship
40	Journal of Library History
41	Law Librarian
42	Law Library Journal
43	Legal Reference Services Quarterly
44	Library Acquisitions: Practice and Theory
45	Library & Archival Security
46	Library and Information Science Research
47	Library Association Record
48	Library Hi Tech
49	Library History

Table 1

CORE JOURNALS USED IN STUDY
(COMPLETE TITLES)

Journal Number	Title
50	Library Journal
51	Library Quarterly
52	Library Resources and Technical Services
53	Library Review
54	Library Technology Reports
55	Library Trends
56	Libri
57	Medical Reference Services Quarterly
58	Microform Review
59	Music Library Association Notes
60	New Library World
61	Ohio Media Spectrum
62	Online
63	Online Review
64	Program: Automated Library and Information Systems
65	Public Libraries
66	Public Library Quarterly
67	Publishers Weekly
68	RQ
69	Reference Services Review
70	Research Strategies
71	Restaurator
72	Rural Libraries
73	SLA News (Scottish Library Association News)
74	Scandinavian Public Library Quarterly
75	Scholarly Publishing
76	School Librarian
77	School Library Journal
78	School Library Media Quarterly
79	Science and Technology Libraries
80	Serials Librarian
81	Serials Review
82	Show-Me Libraries
83	Special Libraries
84	State Librarian
85	Technicalities
86	TOP of the News
87	VOYA
88	West Virginia Libraries
89	Western Association of Map Librarians
90	Wilson Library Bulletin
91	Women Library Workers Journal (WLWJ)

TABLE 2

Core Journals by Indexing Source

Journal Number	Title	LISA	Library Literature	SSCI
01	American Archivist	X	X	X
02	American Libraries	X	X	
03	ASIS	X	X	X
04	Art Libraries Journal	X	X	
05	ASLIB Proceedings	X	X	X
06	Audiovisual Librarian	X	X	
07	Behavioral & Social Sci Libn	X	X	
08	CLIC Quarterly	X	X	
09	Canadian Library Journal	X	X	X
10	Cataloging & Class Quar	X	X	
11	Catalogue and Index	X	X	
12	Catholic Library World	X	X	
13	Collection Building	X	X	
14	Collection Management	X	X	
15	College & Research Libraries	X	X	X
16	College & Research Lib News	X	X	
17	Colorado Libraries	X	X	
18	Database	X	X	X
19	Drexel Library Quarterly	X	X	X
20	Emergency Librarian	X	X	
21	Fontes Artis Musicae	X	X	
22	Government Pub Review	X	X	X
23	IFLA Journal	X	X	X
24	INSPEL	X	X	
25	Indexer, The	X	X	
26	Information Proc & Mngt	X	X	X
27	Information Technology & Lib	X	X	X
28	Interlending & Doc Supply	X	X	
29	Internatl Cataloging	X	X	
30	Internatl Classification	X	X	X
31	Internatl Forum on Info/Doc	X	X	X
32	Internatl Library Review	X	X	X
33	Journal of Academic Libnship	X	X	X
34	Journal of Chem Info&Comp Sci		X	X
35	Journal of Documentation	X	X	X
36	Journal of Educ for Libnship	X	X	X
37	Journal of Info & Image Mgnt	X	X	
38	Journal of Info Science	X	X	
39	Journal of Librarianship	X	X	X
40	Journal of Library History	X	X	
41	Law Librarian	X	X	
42	Law Library Journal	X	X	X
43	Legal Ref Services Quart	X	X	
44	Library Acquisitions	X	X	X
45	Library & Archival Security	X	X	
46	Library & Info Science Research	X	X	X
47	Library Association Record	X	X	
48	Library Hi Tech	X	X	
49	Library History	X	X	

TABLE 2

Core Journals by Indexing Source

Journal Number	Title	LISA	Library Literature	SSCI
50	Library Journal	X	X	X
51	Library Quarterly	X	X	X
52	Library Resources & Tech Serv	X	X	X
53	Library Review	X	X	
54	Library Technology Reports	X	X	
55	Library Trends	X	X	X
56	Libri	X	X	X
57	Medical Ref Services Quart	X	X	
58	Microform Review	X	X	
59	Music Library Assoc Notes	X	X	
60	New Library World	X	X	
61	Ohio Media Spectrum	X	X	
62	Online	X	X	X
63	Online Review	X	X	X
64	Program	X	X	
65	Public Libraries	X	X	
66	Public Library Quarterly	X	X	
67	Publishers Weekly	X	X	
68	RQ	X	X	X
69	Reference Services Review	X	X	
70	Research Strategies	X	X	
71	Restaurator	X	X	
72	Rural Libraries	X	X	
73	SLA News	X	X	
74	Scandinavian Public Lib Quart	X	X	
75	Scholarly Publishing	X	X	
76	School Librarian	X	X	
77	School Library Journal	X	X	
78	School Library Media Quart	X	X	
79	Science & Technology Libs	X	X	
80	Serials Librarian	X	X	X
81	Serials Review	X	X	
82	Show-Me Libraries	X	X	
83	Special Libraries	X	X	X
84	State Librarian	X	X	
85	Technicalities	X	X	
86	TOP of the News	X	X	
87	VOYA	X	X	
88	West Virginia Libraries	X	X	
89	Western Asso of Map Libns	X	X	
90	Wilson Library Bulletin	X	X	X
91	Women Lib Workers Journal	X	X	

Our core of 91 journals compares with 62 journals in the Eaton and Burgin core, 41 in the Nour core, and 39 in the Peritz core. The difference in core size is partially explained by differences in scope (Nour and Peritz excluded state and regional journals from their studies) but is primarily due to increased journal coverage in the major library and information science indexing tools. Future researchers may find that index coverage is becoming too broad to be suitable as a criterion for identifying core journals and may therefore wish to adopt another method such as citation analysis to determine core journals.

Analysis of Core Journals

We proceeded to examine 1984 core journals recording the following information: scope, editorial policy, indexing, inclusion in earlier studies, number of issues, and number of articles.

Scope

Each journal was classified by geographic scope, using three mutually exclusive categories. The three categories were (1) State/Regional, (2) North American, and (3) European. North American journals which concentrate on reporting activities in a restricted geographic area, for example, The Ohio Media Spectrum, were classified as state/regional; North American journals without geographic limitations in their coverage were placed in the general North American category; and journals published in the United Kingdom or other parts of Europe were classified as European. Since periodicals from outside North America or Europe were not included in our study, all journals fell into one of the three categories given above.

Editorial Policy

For each core journal, the editorial policy was noted and classified as either refereed, non-refereed, or by invitation. Editorial policy was determined by statements in the journals themselves and by consulting Mary Ann Bowman's Library and Information Science Journals and Serials: An Analytical Guide (1985).

Indexing and Inclusion in Earlier Studies

Coverage in the three indexing sources, Library Literature, Library and Information Science Abstracts, and Social Science Citation Index was recorded as was inclusion in the earlier Peritz, Nour, or Eaton and Burgin studies. These categories were not exclusive, and each journal was classified in as many categories as were applicable.

Number of Issues

The number of issues of each core journal dated 1984 was recorded. This figure occasionally varied from a journal's stated publication pattern. Library Hi Tech, for example, describes itself as a quarterly but published five issues dated 1984. Whenever such discrepancies occurred, the issues themselves were used to determine frequency.

Substantive Articles

For each 1984 issue of the core journals, the total number of substantive articles was counted. Book reviews, news items, correspondence, and editorials were not included in our count, which was based on the table of contents of each issue rather than upon examination of each article. This procedure resulted in identification of 2,869 articles in the 91 core journals.

Journal Form

The information described above was gathered using standardized forms to assure that uniform information was gathered for each journal title and to arrange data in a manner which would be easy to tabulate. A sample journal form is shown in Figure 1.

In addition to providing space for recording the items described above, the form also included spaces for the journal title and for the journal identification number.

Identification of Research Articles

We then needed to classify the 2,869 substantive articles as either research or non-research articles. Following the earlier Nour and Eaton and Burgin studies, we used Peritz's definition of research: "Research is any inquiry which is carried out, at least to some degree, by a systematic method with the purpose of eliciting some new facts, concepts, or ideas" (Peritz, p. 30). All research, regardless of quality or significance, was counted. Unlike some of the earlier studies, no minimum length was required before an article could be considered research.

Figure 1

Analysis of Journal

Title of Journal _____

Journal ID Number _____

Scope ____
- State/Regional (11)
- North Am. (12)
- European (13)

Editorial Policy ____
- Refereed (21)
- Non-refereed (22)
- Invitation (23)

Indexed in
- LISA (31) ____
- Lib. Lit (32) ____
- SSCI (33) ____

Included in
- Peritz (41) ____
- Nour (42) ____
- Eaton/Burgin (43) ____

Number of issues (51) ____

Articles
- Number of articles(61) ____
- Number of research articles (62) ____

Rather than examine all 2,869 articles, a random sample of twenty percent of the total was chosen using random numbers generated by computer. Prior to classification of the 520 articles selected by this method, the four researchers involved in this project each classified all articles from three sample issues of library journals as being either research or non-research. We then met and compared and discussed results to be certain that we were interpreting Peritz's definition in a uniform manner. Each researcher then analyzed one quarter of the sample, classifying articles as either research or non-research.

Information on the number of sample articles in each journal and on the number of research articles in each journal sample was recorded on the same journal forms used to gather the earlier journal information.

Analysis of Research Articles

One hundred twenty-three articles, 23.6 percent of the sample, were identified as research articles and given further analysis. For each research article, basic bibliographic information, including number of citations, was recorded. In addition, each article was classified by research method, subject, library type, and analytical method. A second form (Figure 2) was used to record this information. Information on authors was also compiled using a separate form (Figure 3).

Figure 2
Analysis of Article

Title of Research Article _____

_____

Journal ID Number _____ Vol. _____ Issue _____ Article ID No. _____

Author _____

_____

Research Method

1. Bilbiometrics	4. Experimental	7. Operations Research	10. Multiple
2. Content Analysis	5. Historical Research	8. Secondary Analysis	11. Other
3. Delphi Method	6. Observation and Description	9. Survey Research	

_____ Number of Citations_____

Subject

		Application of Automation (Y/N)
1.0 General		_____
	1.1 History	_____
	1.2 Libraries and society	_____
	1.3 International librarianship	_____
2.0 Professional concerns		_____
	2.1 Organizations	_____
	2.2 Education for librarianship	_____
	2.3 Status	_____
	2.4 Ethics	_____
	2.5 Other	_____
3.0 Theoretical		_____
	3.1 General	_____
	3.2 Communication Theory	_____
	3.3 Information Science theories	_____
	3.4 Structure of knowledge/information	_____
	3.5 Organization of knowledge/information	_____
	3.6 Disseminaton/retrieval of information	_____
4.0 Applied		_____
	4.1 Administration & management	_____
	4.2 Public Service	_____
	4.3 Processing	_____
	4.4 Systems	_____
	4.5 Materials/collections	_____
	4.6 Buildings	_____
	4.7 Cooperation/Networks	_____
	4.8 Library Users	_____
5.0 Related fields		
	5.1 Publishing	_____
	5.2 Book Selling	_____
	5.3 Other	_____

Type of Library

Academic	_____
Public	_____
School	_____
Special	_____
Multi-type	_____
Non library setting	_____
Not applicable	_____

Analytical technique

Quantitative descriptive	_____	Non quantitative descriptive	_____
Quantitative inferential/predictive	_____	Non quantitative inferential/predictive	_____

Figure 3

Analyis of Author

Article ID_____

Geographic Location_____

_____

Type of Library/Institution
(Public, Academic, School, Special, Library School, Academic Other, Non-Library Setting)

_____

Library School Affiliation

_____ _____

Last Name First Name Initial

Citation

The total number of citations made by each research article was recorded. Only external references (i.e., lists of references, end notes, bibliographies, or footnotes) were examined for citations. Internal references within an article's text were not included in citation counts. Any type of source cited, including interviews, memos, or telephone conversations, was included in the count. However, only unique references were counted; multiple mentions of the same item by an article were counted only once.

We had originally hoped to study a sample of these citations in more detail, analyzing such items as type of source cited, age of source cited, and language of source cited. However, time constraints prevented us from performing such an analysis.

Research Method

Developing comprehensive and mutually exclusive categories for all research methods which could possibly be used in studying library science problems is an extremely difficult task. We originally hoped to replicate a pre-existing classification scheme for research methods but found that earlier studies had varied in their categories. After studying these categories and those of Busha and Harter in Research Methods in Librarianship (Busha and Harter, 1980), we developed eleven categories for use in this study:

1. BIBLIOMETRICS - The measurement of interrelated aspects of writing, publication, and usage, including citation analysis.

2. CONTENT ANALYSIS - A procedure designed to facilitate the objective analysis of the appearance of words, phrases, concepts, themes, characters, or even sentences and paragraphs contained in printed or audiovisual materials.

3. DELPHI METHOD - Designed for use in refining judgemental data collected from a panel of selected experts. Delphi is a systematic approach to the generation of consensus opinions among a group of carefully selected and anonymous respondents.

4. EXPERIMENTAL - Studies in which investigators specify exactly, or control, the conditions that will prevail in the investigation. This category includes both field experiments and those in artificially created environments.

5. HISTORICAL RESEARCH - The collection, verification and analysis of historical information.

6. OBSERVATION AND DESCRIPTION - Directed surveillance of an object or subject of an investigation including the recording of observed data. Case studies and systems analysis fall in this category.

7. OPERATIONS RESEARCH - The application of scientific method to management operations to provide a quantitative basis for decision-making. This method involves problem formulation, the design of methodolgy, and data gathering. The development of models falls into this category.

8. SECONDARY ANALYSIS - Studies that re-analyze published data from other studies.

9. SURVEY RESEARCH - Research based upon data measured directly through interviews or questionnaires.

10. MULTIPLE - Research employing two or more of the methods listed above.

11. OTHER - Any research method not falling into one of the other ten categories.

Subject

Articles were also analyzed according to the subject matter of their research. A hierarchical classification scheme was devised to cover library and information science and other related fields. Each article was assigned to one and only one category. If two or more categories seemed equally applicable to an article, it was moved up the hierarchy to a level which included all applicable categories. The classification scheme used is given below:

1.0 General
- 1.1 History
- 1.2 Libraries and Society
- 1.3 International Librarianship

2.0 Professional Concerns
- 2.1 Organizations
- 2.2 Education for Librarianship
- 2.3 Status
- 2.4 Ethics
- 2.5 Other

3.0 Theoretical
- 3.1 General
- 3.2 Communication Theory
- 3.3 Information Science Theories
- 3.4 Structure of knowledge/information
- 3.5 Organization of knowledge/information
- 3.6 Dissemination/retrieval of information

4.0 Applied
- 4.1 Administration & Management
- 4.2 Public Service
- 4.3 Processing
- 4.4 Systems
- 4.5 Materials/collections
- 4.6 Buildings
- 4.7 Cooperation/Networks
- 4.8 Library Users

5.0 Related Fields
- 5.1 Publishing
- 5.2 Book Selling
- 5.3 Other

Because of the current interest in automation and its effect upon libraries, all articles received one additional piece of

subject analysis. They were classified as to whether or not application of automation was discussed.

Type of Library

Each research article was also classified according to the type of library which was studied in it. Seven exhaustive and mutually exclusive categories were used for this classification:

1) Academic - any library in a post-secondary educational institution except for medical and law libraries.

2) Public - any library which provides general library services without charge to all residents of a given community, district, or region.

3) School - any library affiliated with a school for students of high school age or younger.

4) Special - any library setting other than those given above. Medical and law libraries are classified here even if affiliated with an educational institution.

5) Multi-type - any study involving more than one type of library.

6) Nonlibrary Setting - any study of operations in a nonlibrary setting such as a bibliographic utility or a freelance operation.

7) Not applicable - research which is not concerned with physical location such as citation analysis or content analysis.

Analytical Technique

Articles were further classified according to the major analytical technique of the article. This classification refers not to use of specific statistical tests such as chi square or t tests but rather to the predominant analytical method. Was the data analyzed in quantitative or nonquantitative terms? Was the

study simply descriptive or was it inferential (generalizing beyond the specific research setting) or predictive (projecting future behavior)?

Four categories were used in this section: quantitative descriptive, nonquantitative descriptive, quantitative inferential/predictive, and nonquantitative inferential/predictive. Each article was assigned to one, and only one, of these categories.

Author Analysis

One hundred eighty-three authors produced the 123 research articles analyzed in this paper. (Joint authorship accounts for the difference between the article and author figures.) The following information was collected for each author: geographic location in which s/he worked; type of institution with which s/he was affiliated; and, for those affiliated with schools of library or information science, name of institution.

Geographic location refers to the country in which the author was working at the time the article was written. Institutional affiliation is based on information given in the journal publishing the author's article. In the few cases where such information was not printed in the journal issue, the author's affiliation was classified as unknown.

Analysis of Data

Information collected on the three forms shown in Figures 1 through 3 was entered into computer-readable form and analyzed using dBASE 3. Three different sets of data were created: one for journals, one for articles, and one for authors. Figures 4

Figure 4

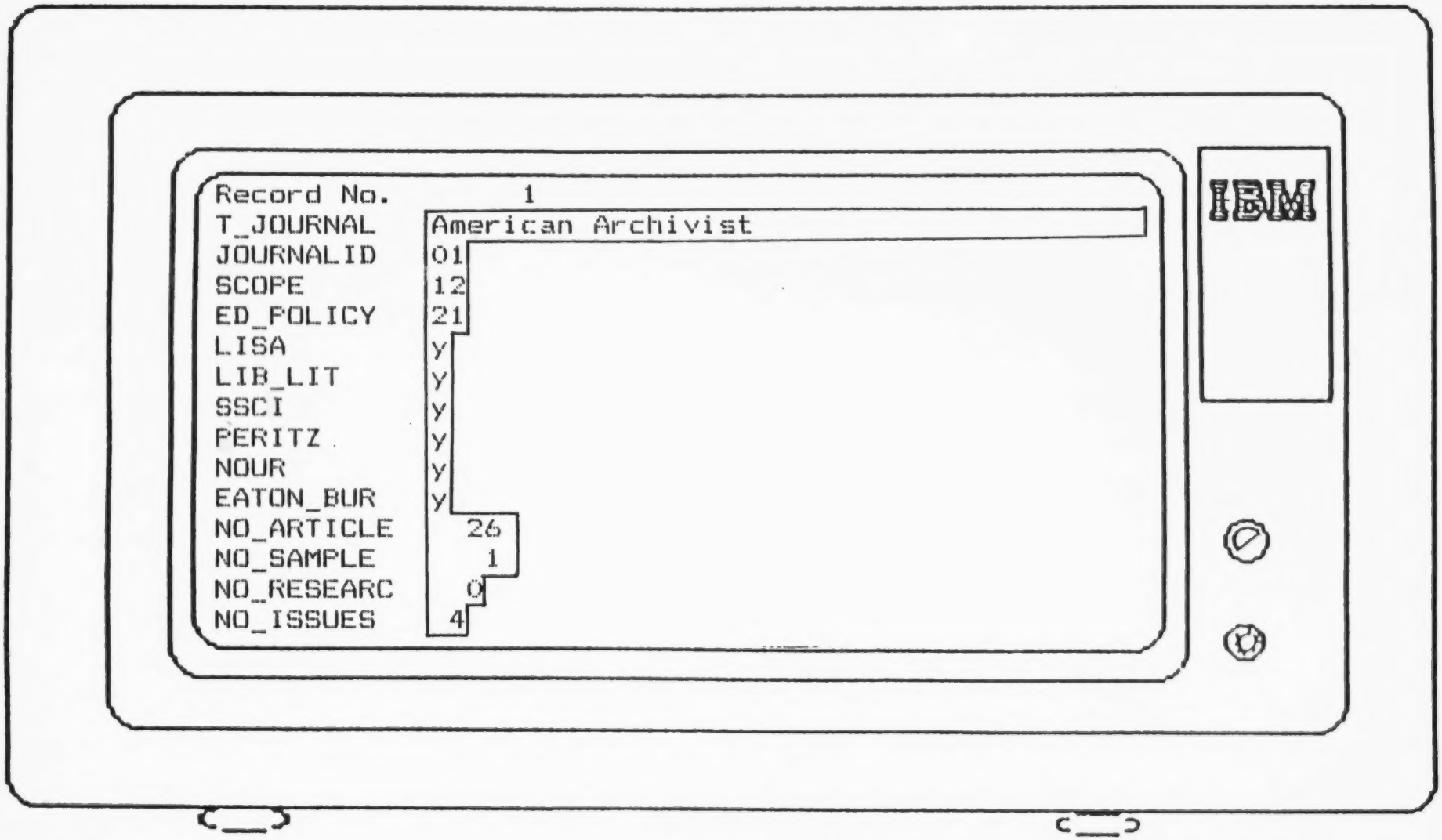

Record No. 1
T_JOURNAL American Archivist
JOURNALID 01
SCOPE 12
ED_POLICY 21
LISA y
LIB_LIT y
SSCI y
PERITZ y
NOUR y
EATON_BUR y
NO_ARTICLE 26
NO_SAMPLE 1
NO_RESEARC 0
NO_ISSUES 4
IBM

Figure 5

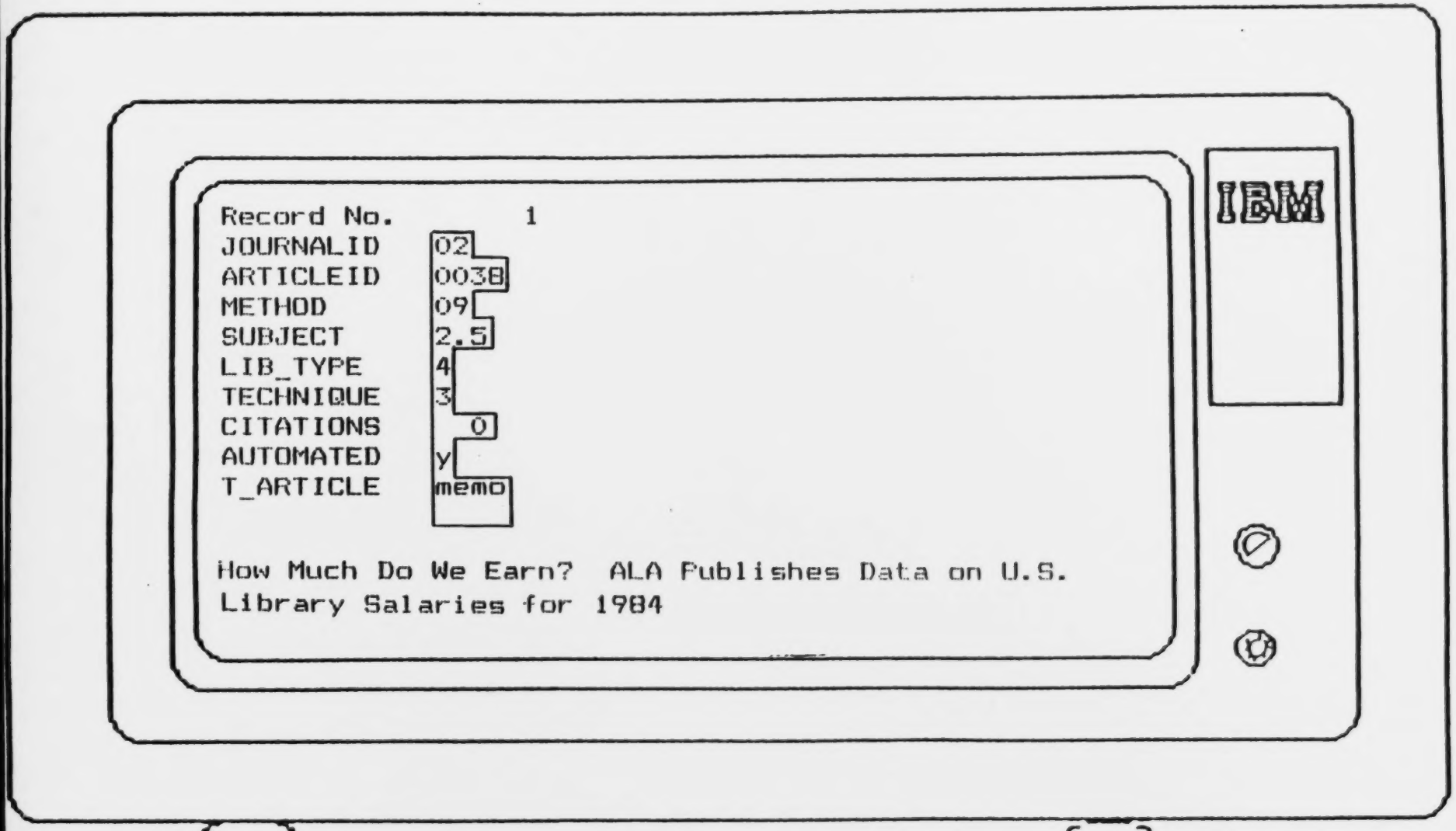
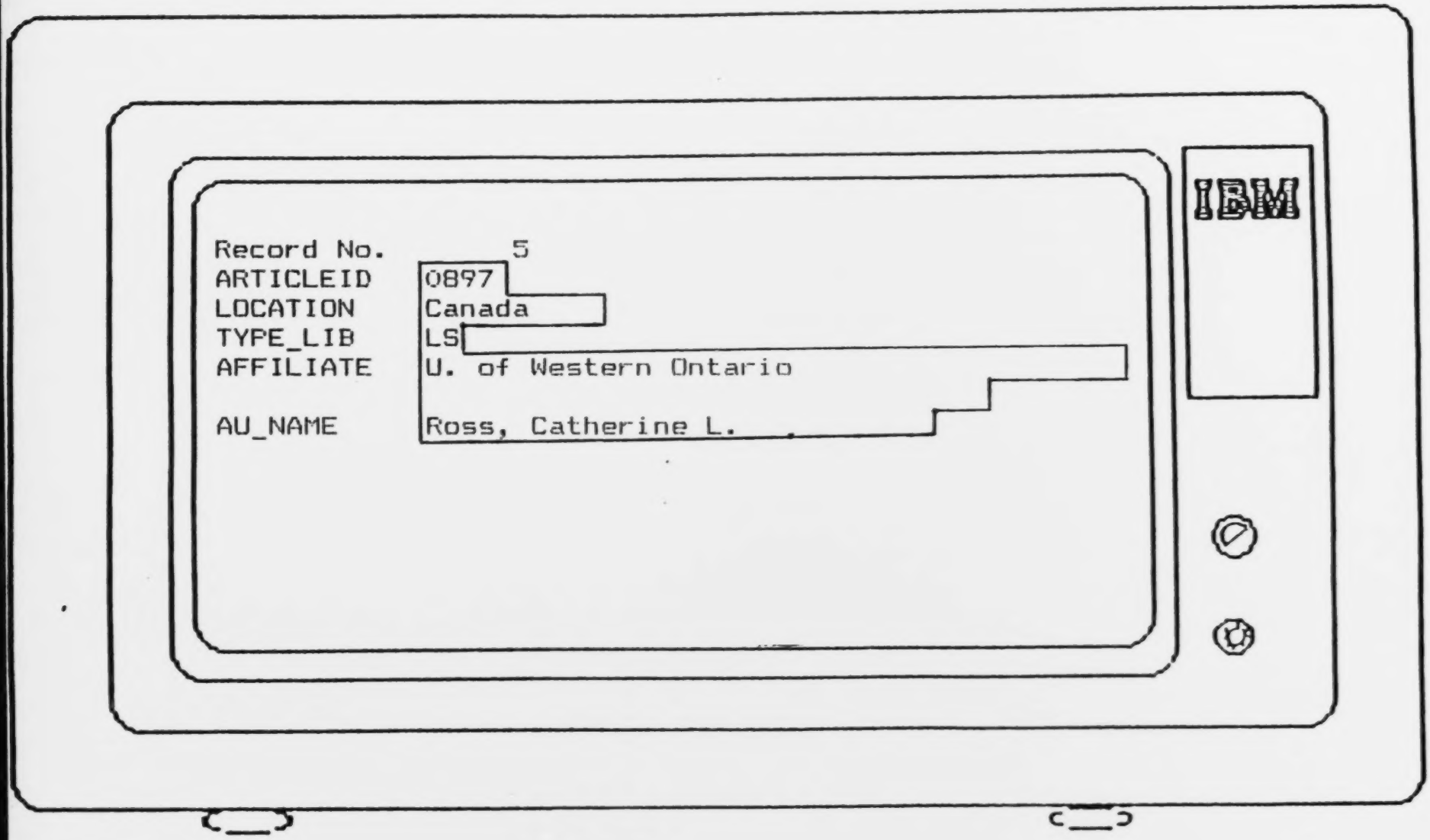

Record No. 1
JOURNALID 02
ARTICLEID 0038
METHOD 09
SUBJECT 2.5
LIB_TYPE 4
TECHNIQUE 3
CITATIONS 0
AUTOMATED y
T_ARTICLE memo
How Much Do We Earn? ALA Publishes Data on U.S. Library Salaries for 1984
IBM

Figure 6


IBM
Record No. 5
ARTICLEID 0897
LOCATION Canada
TYPE_LIB LS
AFFILIATE U. of Western Ontario
AU_NAME Ross, Catherine L.

through 6 are sample entries which show the fields used. Information could be analyzed across sets of data because of the use of journal and article identification numbers to link data.

FINDINGS OF STUDY

Library and Information Science Journal Characteristics

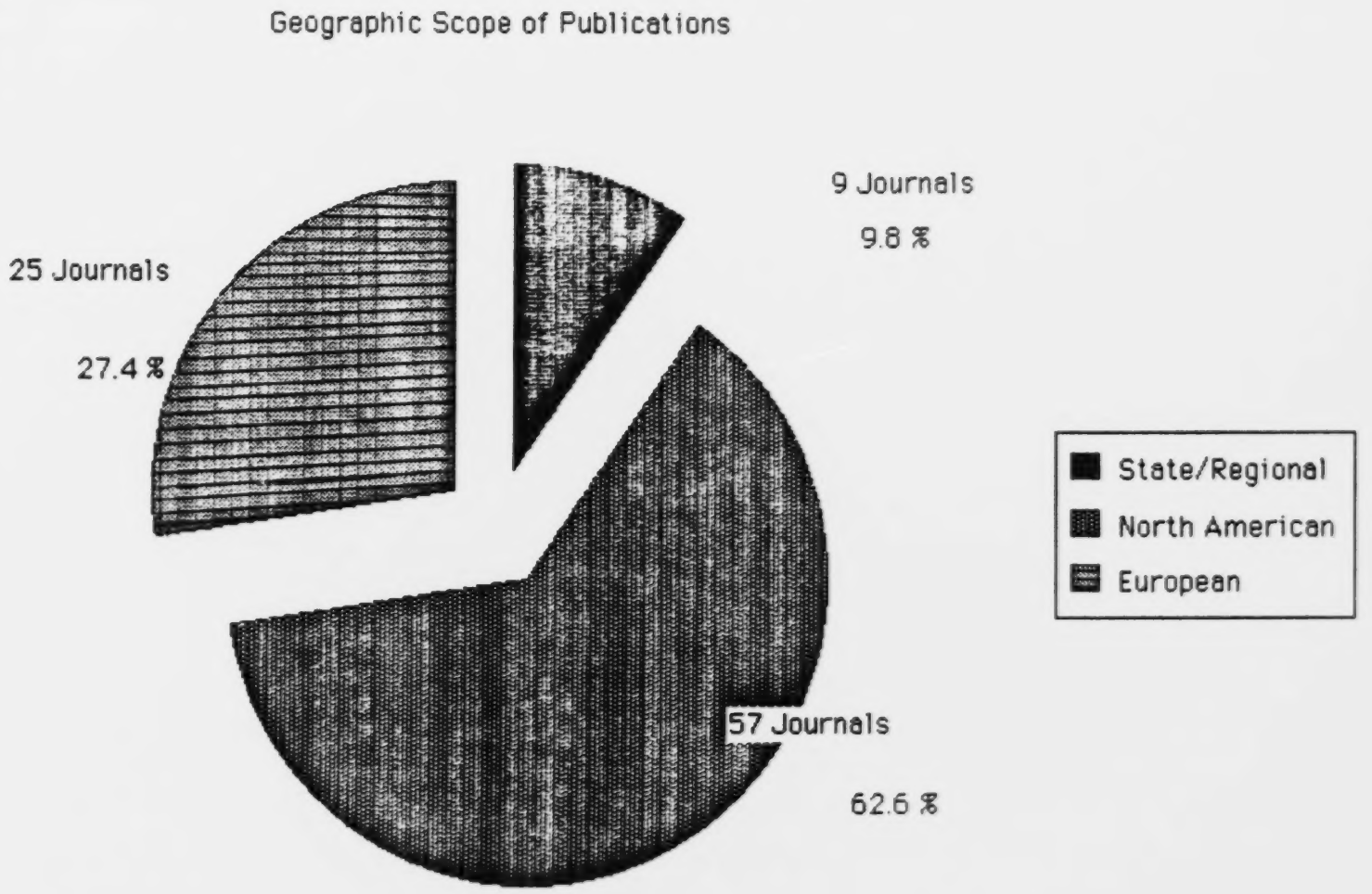
As was reported above, 23.6% of the journal articles in our sample were research articles. Analysis of the core journals by the other major characteristics which we studied (geographic origin, editorial policy, and frequency of publication) yielded the following results:

Nine articles were classified as state/regional; 57 as North American, and 25 as European. The percentage in each category was 9.8% state/regional, 62.6% North American, and 27.4% European. This information is shown as a pie chart in Figure 7.

Analysis of editorial policy showed that 58 journals were non-refereed, 24 were refereed, and 9 published invited articles. The percentage of the core journals in each of these categories was 63.7% non-refereed, 26.3% refereed, and 9.8% by invitation. Figure 8 gives this information in a pie chart.

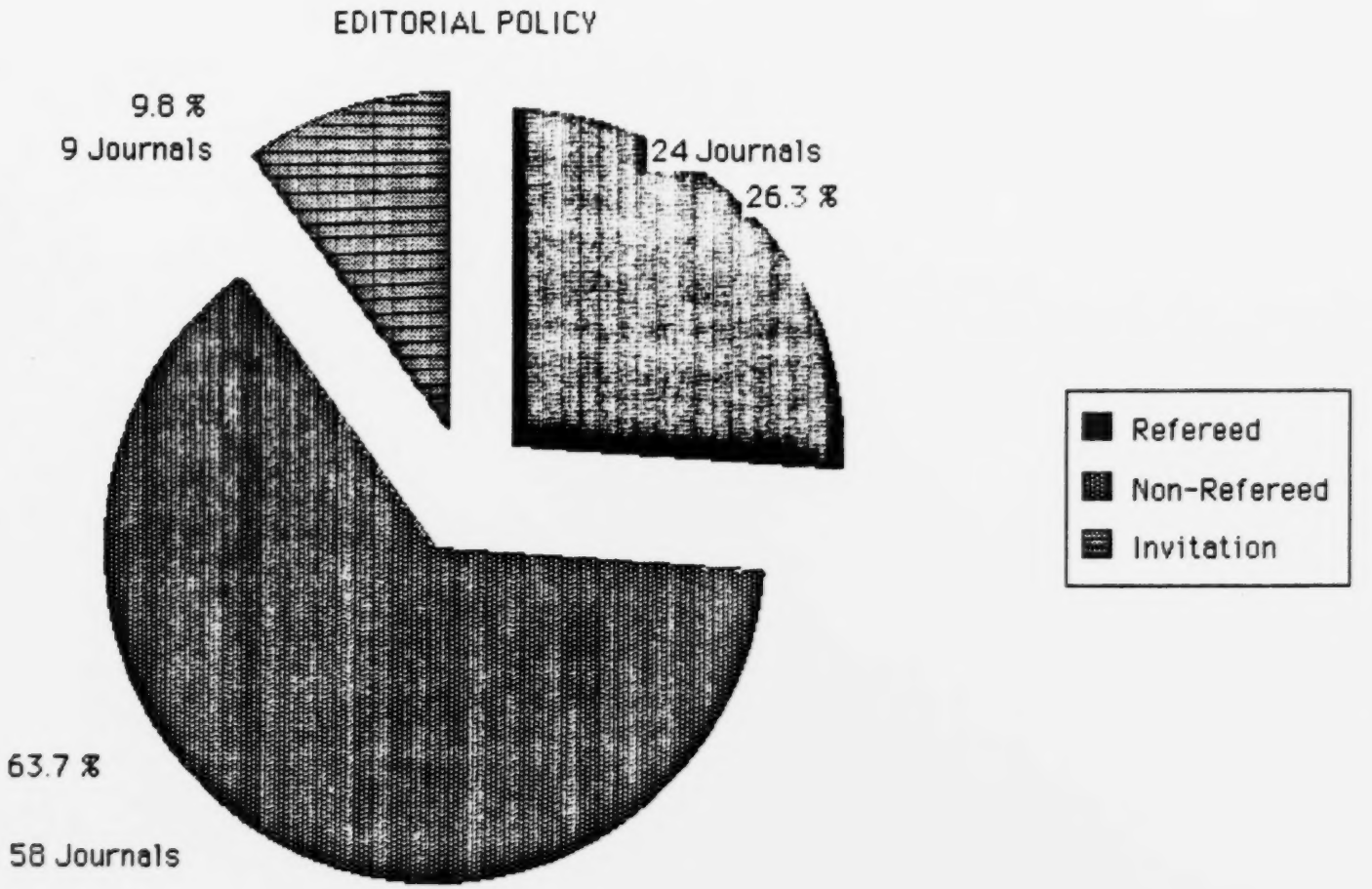
Frequency of publication was broken down into six categories: weekly, semi-monthly, monthly, bi-monthly, quarterly, and semi-annually. As the chart in Figure 9 shows, over 70% of the core journals in this study were published on a quarterly basis, and another 16.4% were published bi-monthly. Only 4 core journals were published semi-annually, and only 8 were published more

Figure 7


Geographic Scope of Publications
9 Journals
9.8 %
25 Journals
27.4 %
57 Journals
62.6 %
State/Regional
North American
European

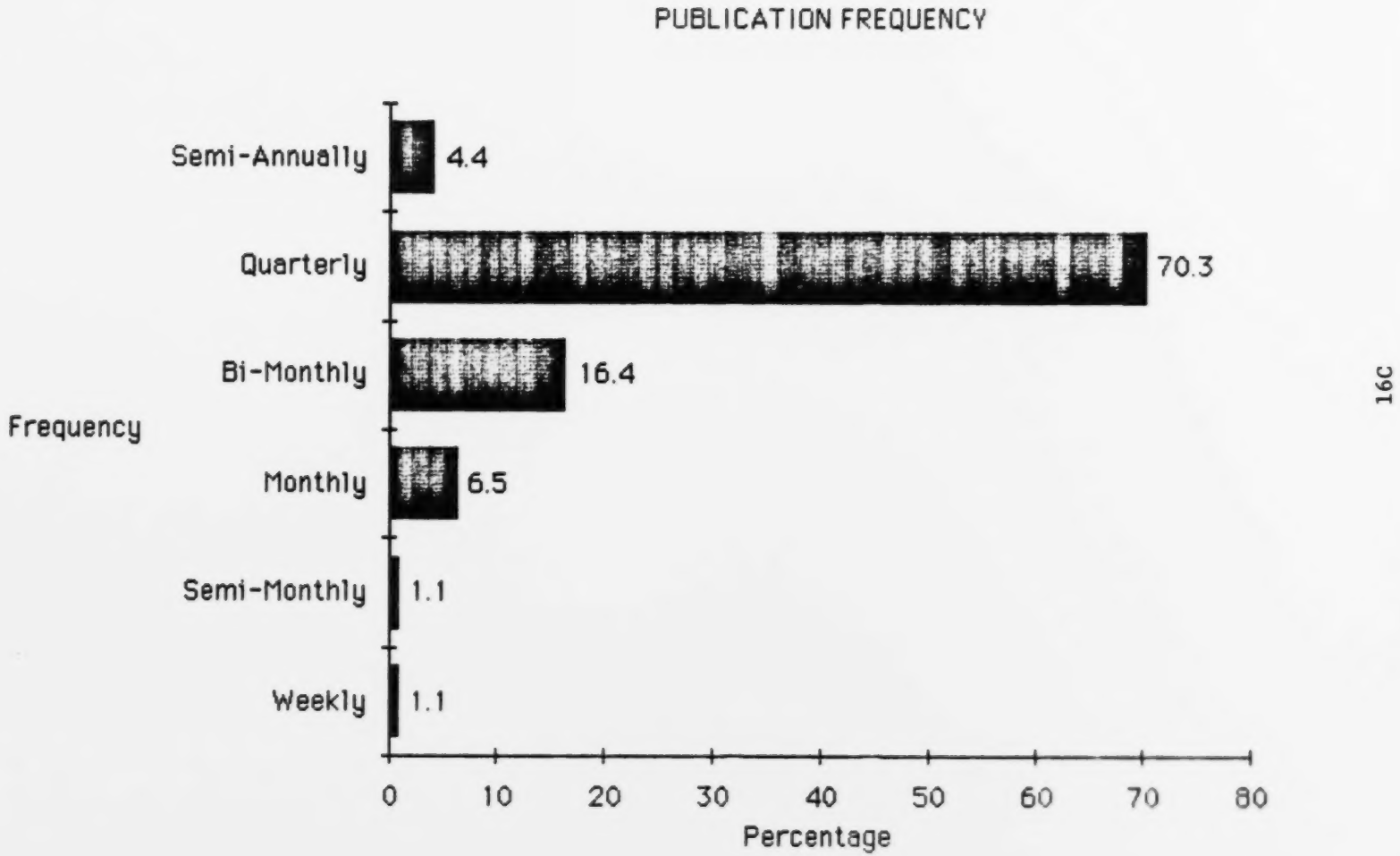
16A

Figure 8


EDITORIAL POLICY
9.6 %
9 Journals
24 Journals
26.3 %
63.7 %
58 Journals
Refereed
Non-Refereed
Invitation

16B

Figure 9


PUBLICATION FREQUENCY
Semi-Annually
4.4
Quarterly
70.3
Bi-Monthly
16.4
Frequency
Monthly
6.5
Semi-Monthly
1.1
Weekly
1.1
0
10
20
30
40
50
60
70
80
Percentage
16C

frequently than bi-monthly.

These three characteristics (geographic origin, editorial policy, and publication frequency) were analyzed according to percentage of research articles in each category to see if research appeared more frequently in some categories than in others. The correlations which were found are shown in Table 3 (Research by Geographic Origin of Journal), Table 4 (Research by Editorial Policy of Journal), and Table 5 (Research by Frequency of Journal Publication).

The geographic origin table shows no significant difference in the percentage of research articles published in North American and European journals. However, the percentage of research articles published in state/regional publications is much lower than the percentages for the other two geographic categories.

Not surprisingly, editorial policy affects the percentage of research articles appearing in a journal. Forty percent of the articles published in refereed journals were research while 23.1% of invited articles were research. Only 17.5% of the articles in non-refereed journals were classified as research.

As Table 5 shows, the percentage of research articles also varied according to the frequency of journal publication. Quarterly and bi-monthly publications contained much higher percentages of research articles than did journals which published more frequently.

Table 3
Research by Geographic Scope of Journal

	State/ Regional	North American	European	Total
Total # Articles	54	376	90	520
# Research	4	94	25	123
% Research	7.41	25.0	27.78	23.65

Table 4

Research by Editorial Policy

	Refereed	Non-Refereed	Invitation	Total
Total # Articles	130	338	52	520
# Research	52	59	12	123
% Research	40.0	17.46	23.08	23.65

Table 5
Research by Frequency of Publication

	W (over 50)	S/M (20-50)	M (12-19)	Bi/M (6-11)	Q (3-5)	S/A (< 3)	Total
Total # Articles	28	19	32	119	314	8	520
# Research Articles	0	2	1	35	85	0	123
% Percentage	0	10.5	3.1	29.4	27.1	0	23.65

Table 6

Journal Rankings by Research

RANK	TITLE	NUMBER IN SAMPLE	NUMBER RESEARCH	PERCENT RESEARCH
1	Behavioral & Social Sci Libn	5	5	100.0
1	Library & Info Science Research	4	4	100.0
1	Journal of Educ for Libnship	2	2	100.0
1	Library Technology Reports	2	2	100.0
1	Art Libraries Journal	1	1	100.0
1	Libri	1	1	100.0
1	Music Library Assoc Notes	1	1	100.0
8	ASIS	12	9	75.0
8	Library Resources & Tech Serv	4	3	75.0
8	Library Review	4	3	75.0
8	Special Libraries	4	3	75.0
12	Canadian Library Journal	6	4	66.7
12	Internatl Library Review	6	4	66.7
12	Fontes Artis Musicae	3	2	66.7
12	Journal of Librarianship	3	2	66.7
12	Microform Review	3	2	66.7
17	College & Research Libraries	8	5	62.5
18	Collection Management	5	3	60.0
19	Science & Technology Libs	6	3	50.0
19	Cataloging & Class Quar	4	2	50.0
19	Interlending & Doc Supply	4	2	50.0
19	Drexel Library Quarterly	2	1	50.0
19	Library Acquisitions	2	1	50.0
24	ASLIB Proceedings	7	3	42.9
25	Journal of Academic Libnship	5	2	40.0
25	Library Quarterly	5	2	40.0
27	Information Proc & Mngt	13	5	38.5
28	RQ	8	3	37.5
29	Library Trends	11	4	36.4
30	Journal of Documentation	6	2	33.3
30	Audiovisual Librarian	3	1	33.3
30	Journal of Library History	3	1	33.3
30	Public Library Quarterly	10	3	30.0
30	Serials Librarian	10	3	30.0
36	Government Pub Review	7	2	28.6
36	Internatl Forum on Info/Doc	7	2	28.6
37	American Libraries	11	3	27.3
38	Internatl Classification	4	1	25.0
38	Journal of Chem Info & Comp Sci	12	3	25.0
40	Information Technology & Lib	10	2	20.0
40	Online	10	2	20.0
40	Collection Building	5	1	20.0
40	Journal of Info Science	5	1	20.0

Table 6 Continued

Journal Ranking by Research

44	Database	6	1	16.7
45	CLIC Quarterly	7	1	14.3
45	College & Research Lib News	7	1	14.3
45	Medical Ref Services Quart	7	1	14.3
45	Reference Services Review	7	1	14.3
49	Library & Archival Security	8	1	12.5
50	Library Journal	19	2	10.5
51	TOP of the News	11	1	9.1
52	School Library Journal	12	1	8.3
53	Library Hi Tech	15	1	6.7
54	Show-Me Libraries	19	1	5.3
55	Publisher's Weekly	28	0	0.0
55	Journal of Info & Image Mgnt	11	0	0.0
55	Public Libraries	10	0	0.0
55	Ohio Medium Spectrum	9	0	0.0
55	Serials Review	9	0	0.0
55	Wilson Library Bulletin	9	0	0.0
55	Library Association Record	7	0	0.0
55	Emergency Librarian	6	0	0.0
55	Scandinavian Public Lib Quart	6	0	0.0
55	Scholarly Publishing	6	0	0.0
55	Rural Libraries	5	0	0.0
55	Colorado Libraries	4	0	0.0
55	IFLA Journal	4	0	0.0
55	Indexer, The	4	0	0.0
55	Technicalities	4	0	0.0
55	Western Assoc of Map Libns	4	0	0.0
55	INSPEL	3	0	0.0
55	Internatl Cataloging	3	0	0.0
55	Law Library Journal	3	0	0.0
55	New Library World	3	0	0.0
55	SLA News	3	0	0.0
55	VOYA	3	0	0.0
55	Catholic Library World	2	0	0.0
55	Program	2	0	0.0
55	Women Lib Workers Journal	2	0	0.0
55	American Archivist	1	0	0.0
55	Catalogue and Index	1	0	0.0
55	Law Librarian	1	0	0.0
55	Online Review	1	0	0.0
55	Research Strategies	1	0	0.0
55	School Library Media Quart	1	0	0.0
55	State Librarian	1	0	0.0
55	West Virginia Libraries	1	0	0.0

Table 6 is a ranked list of core journals according to the percentage of research articles in the sample from each journal. Information in this table should be interpreted with a great deal of caution. Because of the random sampling technique used to select our sample, many of the core journals do not have enough sample articles to be statistically significant. Four journals, Library History, Restaurator, School Librarian, and Legal Reference Services Quarterly, had no articles in the sample.

Library and Information Science Article Characteristics

Research Method

Analysis of the 123 research articles revealed that the three most frequent research methods employed in 1984 were historical research (23.6%), survey research (20.3%), and observation and description (17.0%). Eighteen articles, 14.6% of the total, used more than one research method. Only one article (0.8%) was classified as other, a category created to account for any methods which did not fit elsewhere in our classification scheme. Table 7 gives a comprehensive listing of research methods with their frequencies and percentages. Figure 10 shows the same information graphically.

Subject of Research Articles

Forty-five and one-half percent of the research articles analyzed were accounted for by six subject classification categories: materials/collections (11.4%), history (7.3%), systems (7.3%), education for librarianship (6.5%), applied, general (6.5%), and public service (6.5%). Table 8 gives subject

Table 7

Frequency of Research Methods

Method		Frequency	Percentage
01	Bibliometrics	4	3.3 %
02	Content Analysis	6	4.9 %
03	Delphi Method	0	0.0 %
04	Experimental	10	8.1 %
05	Historical Research	29	23.7 %
06	Observation/Description	21	17.0 %
07	Operations Research	6	4.9 %
08	Secondary Analysis	3	2.4 %
09	Survey Research	25	20.3 %
10	Multiple	18	14.6 %
11	Other	1	0.8 %
	Totals	123	100.0 %

Figure 10

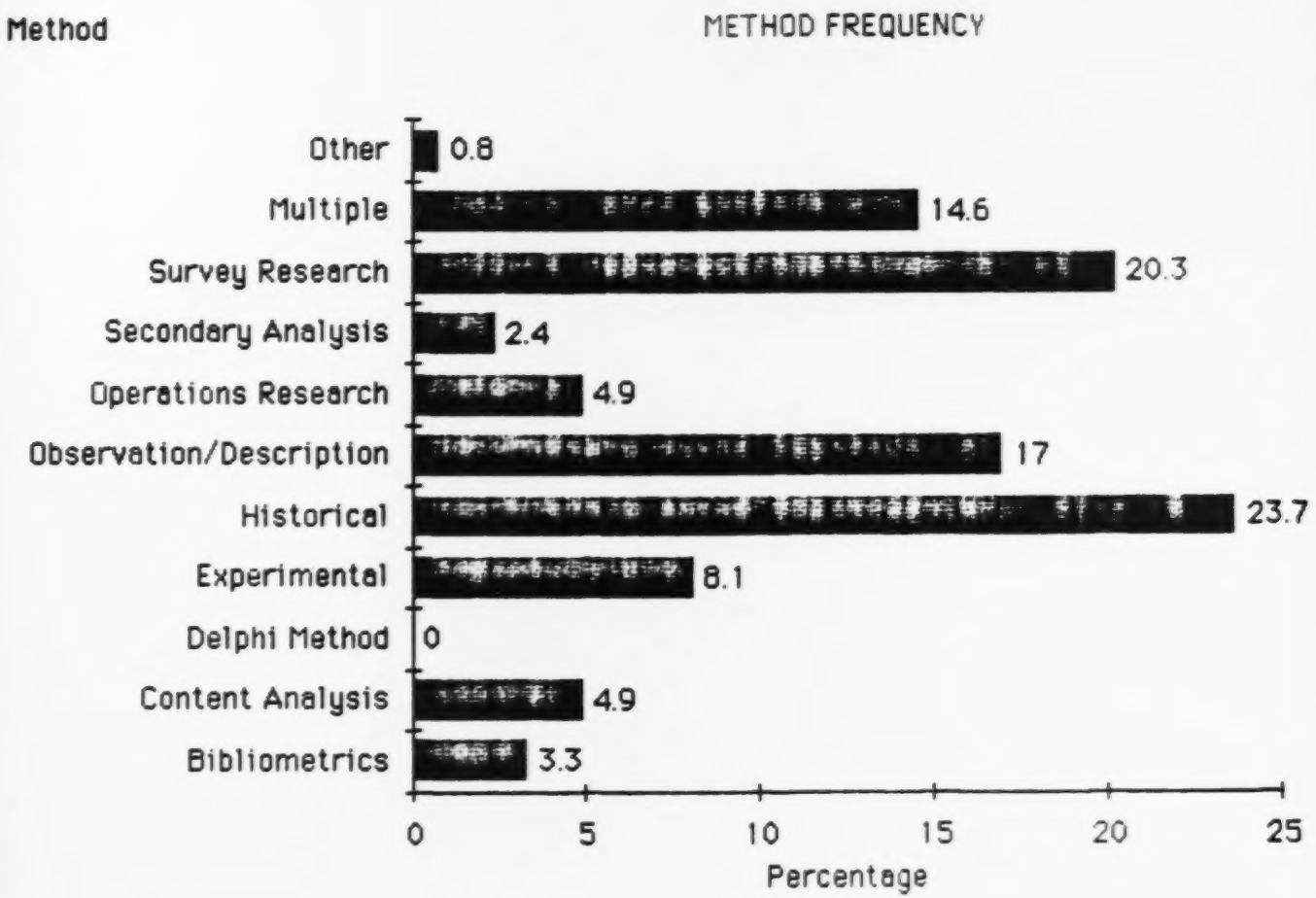

Method
METHOD FREQUENCY
Other
0.8
Multiple
14.6
Survey Research
20.3
Secondary Analysis
2.4
Operations Research
4.9
Observation/Description
17
Historical
23.7
Experimental
8.1
Delphi Method
0
Content Analysis
4.9
Bibliometrics
3.3
0
5
10
15
20
25
Percentage

Table 8
Subject Frequency

Subject		Frequency	Percentage
1.0	General	0	0.0
1.1	History	9	7.3
1.2	Libraries and Society	3	2.4
1.3	International Librarianship	2	1.6
		14	
2.0	Professional Concerns	1	.8
2.1	Organizations	1	.8
2.2	Education for Librarianship	8	6.5
2.3	Status	3	2.4
2.4	Ethics	1	.8
2.5	Other	6	4.9
		20	
3.0	Theoretical	2	1.6
3.1	General	0	0.0
3.2	Communication Theory	2	1.6
3.3	Info Science Theories	4	3.3
3.4	Structure of Knowledge/info	2	1.6
3.5	Organization of knowledge/info	2	1.6
3.6	Dissemination/ retrieval of info	4	3.3
		16	
4.0	Applied	8	6.5
4.1	Administration/Mngt.	7	5.7
4.2	Public Service	8	6.5
4.3	Processing	4	3.3
4.4	Systems	9	7.3
4.5	Materials/coll.	14	11.4
4.6	Buildings	0	0.0
4.7	Coop/Networks	4	3.3
4.8	Library Users	8	6.5
		62	
5.0	Related Fields	0	0.0
5.1	Publishing	4	3.3
5.2	Book Selling	0	0.0
5.3	Other	7	5.7
		11	
	Totals	123	100.0

frequencies and percentages for all 123 research articles.

The hierarchical nature of our classification scheme allows the subjects of research articles to be placed into five general categories. Such placement gives a clearer picture of the broad areas of research in our field. The percentage in each broad category is as follows: applied, 50.4%; professional concerns, 16.3%; theoretical, 13.0%; general, 11.4%; and related fields, 8.9%. Over half of the 1984 research articles were on applied topics, outnumbering research on theoretical topics by nearly four to one. These figures show that library science research is heavily concentrated on topics with immediate practical applications. Table 9 gives the frequency of each broad subject category.

28.5 percent of the 1984 research articles dealt with applications of automation. Table 10 shows the correlation between automation and the five broad subject areas. It is interesting to note that none of the research articles on general library topics or on related fields dealt with applications of automation, but 25% of the articles on professional concerns and nearly 40% of both the applied and theoretical articles did.

Library Type

Table 11 shows the type of libraries upon which research is being done. Nearly a quarter of all library research (22.8%) was done on academic libraries; in 21.9% of research, the setting was not relevant; and multi-type settings and non-library settings each accounted for 17.1% of the research articles. Special libraries were studied in 8.9% of the articles, public libraries

Table 9

Frequency and Percentage of Broad Subject Areas

Broad Subject	Frequency	Percentage
1.0 General	14	11.4 %
2.0 Professional Concerns	20	16.3 %
3.0 Theoretical	16	13.0 %
4.0 Applied	62	50.4 %
5.0 Related Fields	11	8.9 %
Totals	123	100.0 %

Table 10

Application of Automation By Broad Subject

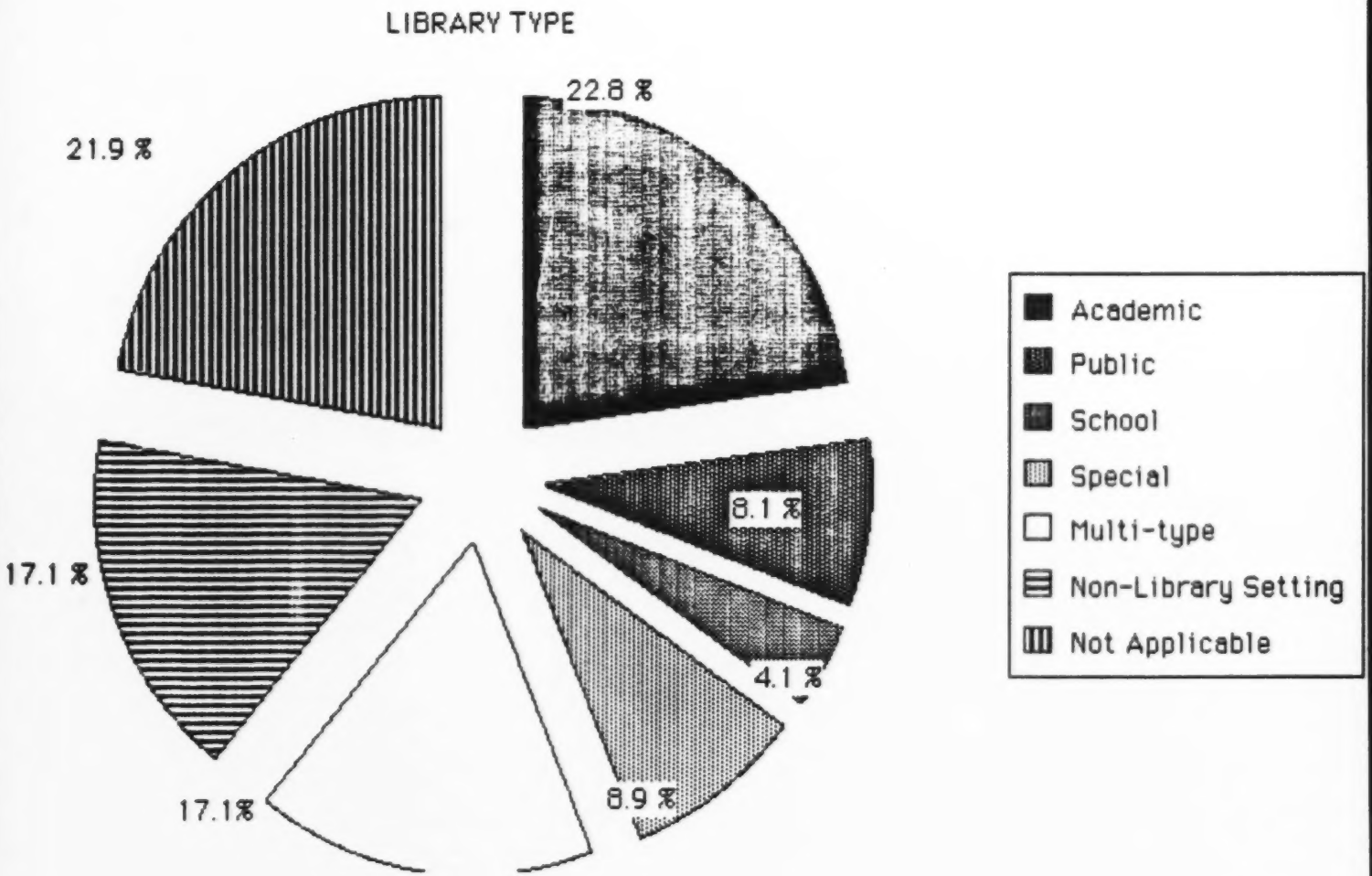
Broad Subject	Number of Applications	Percentage
1.0 General	-	-
2.0 Professional Concerns	5	25
3.0 Theoretical	6	37.5
4.0 Applied	24	38.7
5.0 Related Fields	-	-
Totals	35	28.5

Table 11

Frequency of Library Types

Library Type		Frequency	Percentage
1	Academic	28	22.8 %
2	Public	10	8.1 %
3	School	5	4.1 %
4	Special	11	8.9 %
5	Multi-type	21	17.1 %
6	Non-library setting	21	17.1 %
7	Not applicable	27	21.9 %
	Totals	123	100.0 %

Figure 11


LIBRARY TYPE
22.8 %
21.9 %
17.1 %
8.1 %
4.1 %
8.9 %
17.1%
Academic
Public
School
Special
Multi-type
Non-Library Setting
Not Applicable

in 8.1%, and school libraries in 4.1%. Figure 11 shows this information in graphic form.

Analytical Technique

As Table 12 shows, the most common analytical technique used in 1984 library research articles was non-quantitative descriptive (used in 37.4% of the sample) while the least common technique was non-quantitative inferential/predictive probably due to the difficulty or making generalizations or predictions without quantitative data. Research articles split almost evenly in their use of quantitative versus non-quantitative techniques, but there was significantly more descriptive than inferential or predictive analysis done (61.7% vs 38.1%). Figures 12 and 13 illustrate these distributions.

Citations

Tables 13, 14, and 15 illustrate that there are correlations between the average number of citations made by an article and its research method, subject, and analytical technique. Secondary analysis and historical research were the research methods with the highest average citations while survey research and observation and description had the lowest average number of citations. Articles on applied topics averaged fewer citations (11) than any other subject category; articles on related fields cited the most (an average of 20 citations per article). Articles using nonquantitative analytical techniques contained significantly higher number of citations than did quantitative articles.

Table 12

Analytical Techniques

QUANTITATIVE DESCRIPTIVE	QUANTITATIVE PREDICTIVE	NONQUANTITATIIVE DESCRIPTIVE	NONQUANTITATIVE PREDICTIVE	TOTAL
30	35	46	12	123
24.39	28.46	37.40	9.76	100.00

Figure 12

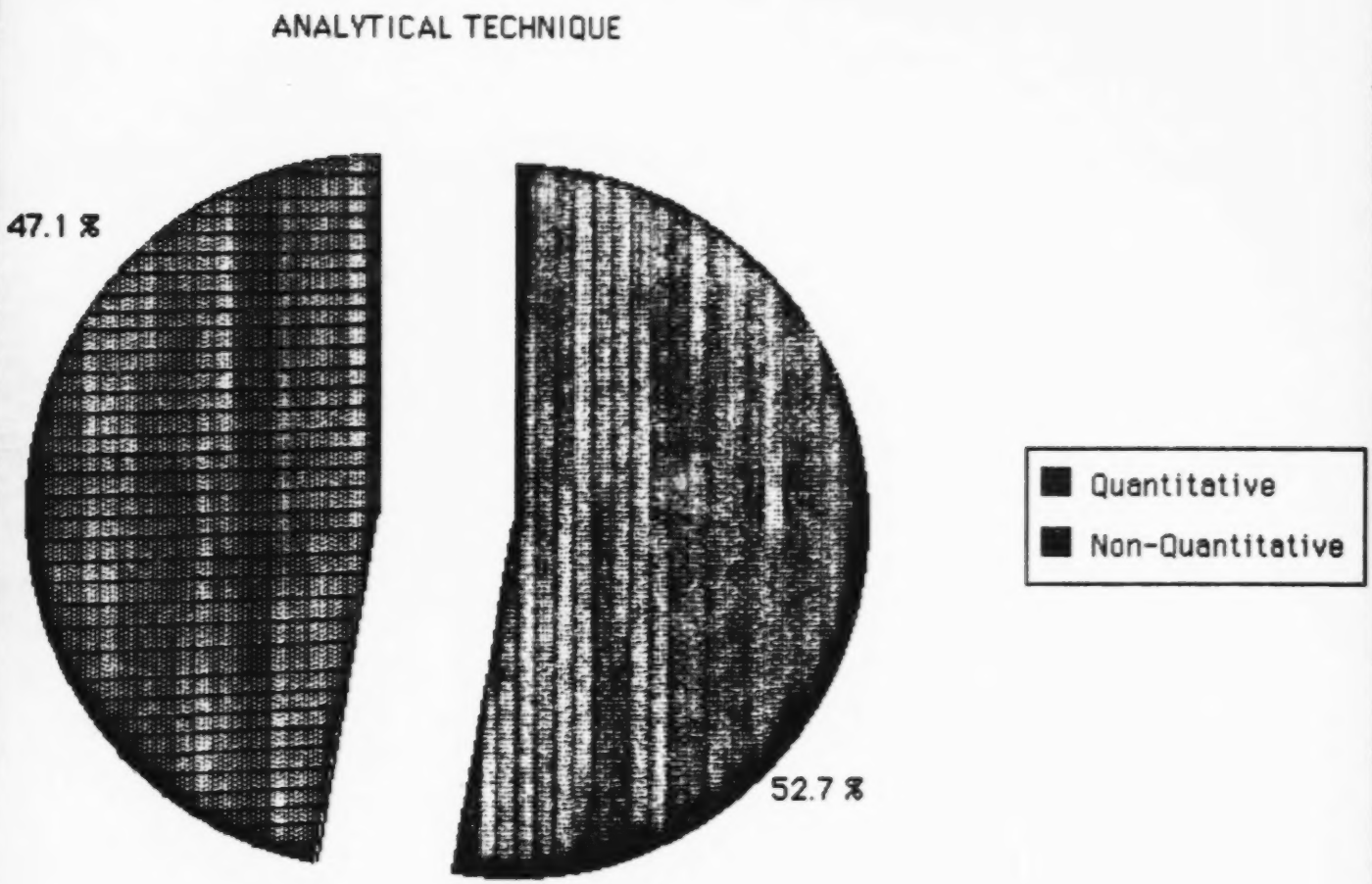

ANALYTICAL TECHNIQUE
47.1 %
52.7 %
Quantitative
Non-Quantitative

Figure 13

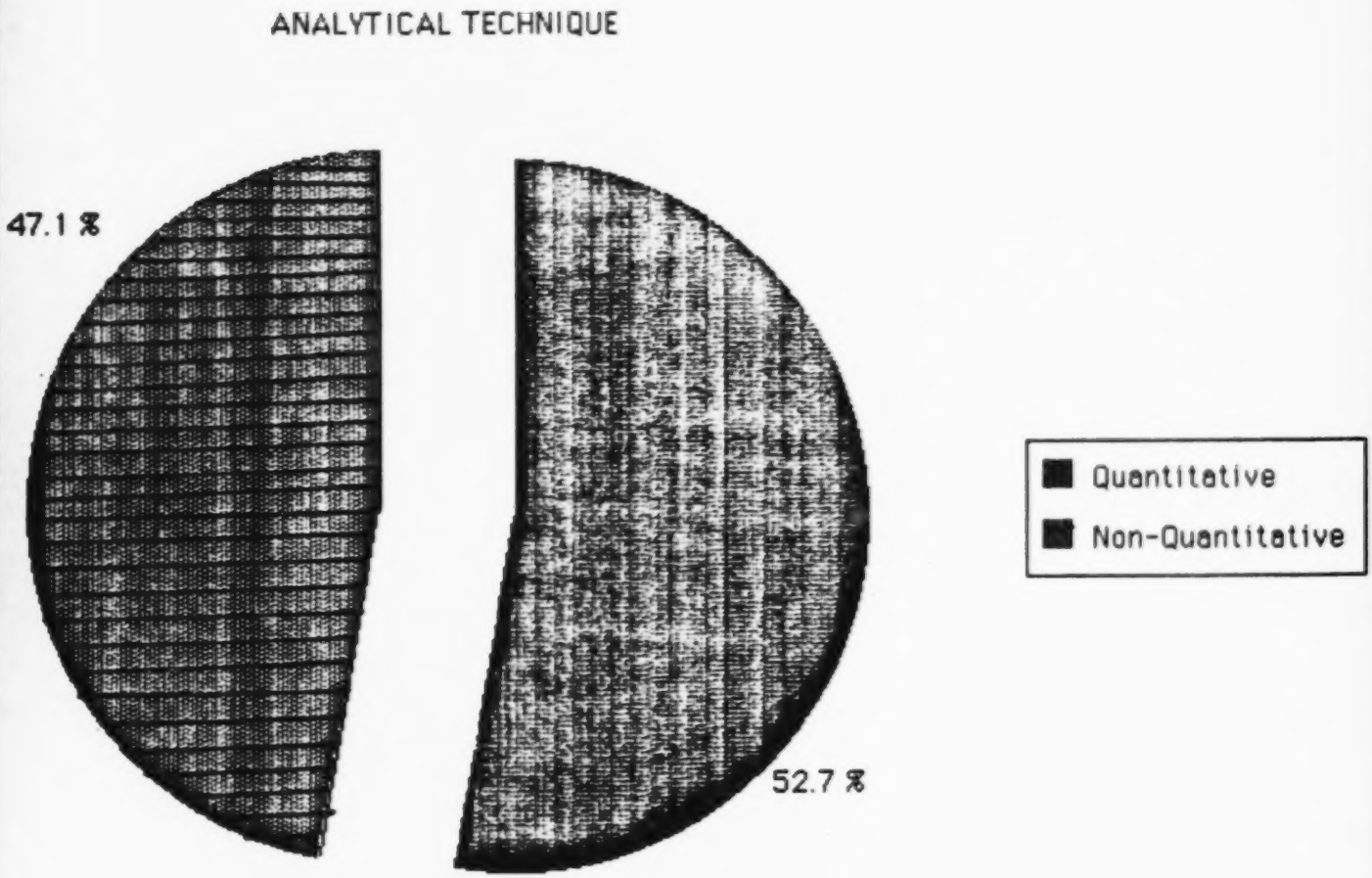

ANALYTICAL TECHNIQUE
47.1 %
52.7 %
Quantitative
Non-Quantitative

Table 13

Average Number of References by Research Method

Research Method	Average Number of References
1. Bibliometrics	12
2. Content Analysis	19
3. Delphi Method	0
4. Experimental	13
5. Historical	23
6. Observation/Description	8
7. Operations Research	11
8. Secondary Analysis	26
9. Survey Research	7
10. Multiple	13
11. Other	10

Table 14

Average Number of References by Broad Subject

Broad Subject	Average Number of References
1.0 General	18
2.0 Professional Concerns	14
3.0 Theoretical	16
4.0 Applied	11
5.0 Related Fields	20

Table 15

Average Number of References by Analytical Technique

Analytical Technique	Average Number of References
1. Quantitative Descriptive	9
2. Quantitative Inferential/ Predictive	12
3. Non-Quantitative Descriptive	17
4. Non-Quantitative Inferential/ Predictive	18

Correlations among Characteristics

We generated distribution tables to see if there were any correlations between the different characteristics of research articles. Table 16 shows the distribution of research methods by broad subject area. The table reveals that multiple methods were used in the study of all subject areas. No one cross of method and subject dominates library science research. The largest single category, survey method on an applied subject, accounted for only 13.8% of the research articles, and 31 different combinations of subject and method appeared in our sample. What is surprising are some of the combinations which do not appear on the table: most general subjects received historical study, bibliometric studies were surprisingly few, and no instances of the delphi method appeared in the sample.

Crossing the broad subject areas with analytical technique reveals even greater diversity; of the 20 possible combinations of technique and subject, only one, quantitative inferential/predictive on a general subject, does not occur in the sample. The most common pairings were quantitative inferential/predictive on an applied topic (19.5% of the sample), quantitative descriptive on an applied topic (14.6% of the sample), non-quantitative descriptive on an applied topic (13.8%), and non-quantitative descriptive on a general subject (8.9%). Table 17 shows the distribution of broad subject by analytical technique.

Table 18, the distribution of research method by analytical technique, shows a similiarly scattered distribution. Twenty-nine different combinations of method and technique appear in the

Table 16

Distribution of Research Method by Subject

Research Method	Subject					
	1.0	2.0	3.0	4.0	5.0	Totals
1. Bibliometrics	-	-	1	1	2	4
2. Content Analysis	-	1	3	2	-	6
3. Delphi Method	-	-	-	-	-	0
4. Experimental	-	1	2	7	-	10
5. Historical	10	5		10	4	29
6. Observation/ Description		4	5	8	4	21
7. Operations Research	-	1	1	4	-	6
8. Secondary Analysis	-	2	1	-	-	3
9. Survey Research	1	6	1	17	-	25
10 Multiple	3	-	1	13	1	18
11. Other	-	-	1	-	-	1
Totals	14	20	16	62	11	123

Table 17

Distribution of Subject by Analytical Technique

Subject	Research Analytical Technique				
	1 Qu/Des	2 Qu/Pre	3 Non Qu/Des	4 Non Qu/Pre	Totals
1.0 General	2	-	11	1	14
2.0 Professional Concerns	4	4	8	4	20
3.0 Theoretical	4	5	4	3	16
4.0 Applied	18	24	17	3	62
5.0 Related Fields	2	2	6	1	11
Totals	31	34	46	12	123

* Analytical Technique

1. Quantitative Descriptive
2. Quantitative Inferential/Predictive
3. Non-Quantitative Descriptive
4. Non-Quantitative Inferential/Predictive

Table 18

Distribution of Research Method by Analytical Technique

Research Method	Analytical Technique				
	1 Qu/Des	2 Qu/Pre	3 Non Qu/Des	4 Non Qu/Pre	Totals
1. Bibliometrics	3	1	-	-	4
2. Content Analysis	2	2	1	1	6
3. Delphi Method	-	-	-	-	0
4. Experimental	2	7	1	-	10
5. Historical	1	-	23	5	29
6. Observation/ Description	4	2	13	2	21
7. Operations Research	3	3	-	-	6
8. Secondary Analysis	-	-	1	2	3
9. Survey Research	10	10	4	1	25
10. Multiple	4	10	3	1	18
11. Other	1	-	-	-	1
Totals	30	35	46	12	123

* Analytical Technique
1. Quantitative Descriptive
2. Quantitative Inferential/Predictive
3. Non-Quantitative Descriptive
4. Non-Quantitative Inferential/Predictive

table. Only two, historical method/nonquantitative descriptive and observation and description/ nonquantitative descriptive, occur in more than 10% of the sample cases.

Table 19 indicates the relationship between research method and type of library studied. A wide variety of methods is again evident in this table. However, it is interesting to note that most studies of public libraries were historical while the use of multiple research methods was most commonly employed in studies of academic libraries. The survey method was employed in every type of library setting.

Characteristics of Library and Information Science Authors

Geographic Location

Seventy-eight and one-tenth percent of the authors of 1984 library and information science research articles analyzed worked in the United States, 8.2% worked in England, 5.4% in Canada, and 2.1% in India. No other geographic location accounted for more than one percent of the total. Information on the geographic location of authors is summarized in Table 20 and shown graphically in Figure 14.

Library Affiliation

Nearly two-thirds of all authors of research articles were affiliated with either academic libraries (41.5%) or library schools (23.5%). 13.1% of the authors were in non-library /non-academic settings, 7.6% were academics not affiliated with a library or library school, 6.0% were in special libraries, 3.8% in school libraries, and only 2.7% in public libraries. This information is shown in Table 21 and Figure 15.

Table 19

Distribution of Research Method
by Type of Library

Methodology	Type of Library							
	1 A	2 P	3 Sc	4 Sp	5 M	6 N	7 NA	Total
1. Bibliometrics	1	-	-	-	-	1	2	4
2. Content Analysis	1	-	-	-	1	1	3	6
3. Delphi Method	-	-	-	-	-	-	-	-
4. Experimental	3	-	-	2	-	2	3	10
5. Historical	1	5	2	-	6	7	8	29
6. Observation/ Description	2	2	-	4	3	3	7	21
7. Operations Research	3	-	-	-	1	1	1	6
8. Secondary Analysis	-	-	-	-	2	1	-	3
9. Survey Research	9	3	1	2	6	2	2	25
10. Multiple	8	-	2	3	2	2	1	18
11. Other	-	-	-	-	-	1	-	1
Totals	28	10	5	11	21	21	27	123

Table 20

Geographic Location of Authors

	NUMBER	PERCENT
UNITED STATES	143	78.14
ENGLAND	15	8.20
CANADA	10	5.46
INDIA	4	2.19
SCOTLAND	2	1.09
AUSTRALIA	2	1.09
SWEDEN	1	0.55
NIGERIA	1	0.55
FRANCE	1	0.55
IRELAND	1	0.55
GERMANY	1	0.55
UNKNOWN	2	1.09
TOTAL	183	100.0

Figure 14

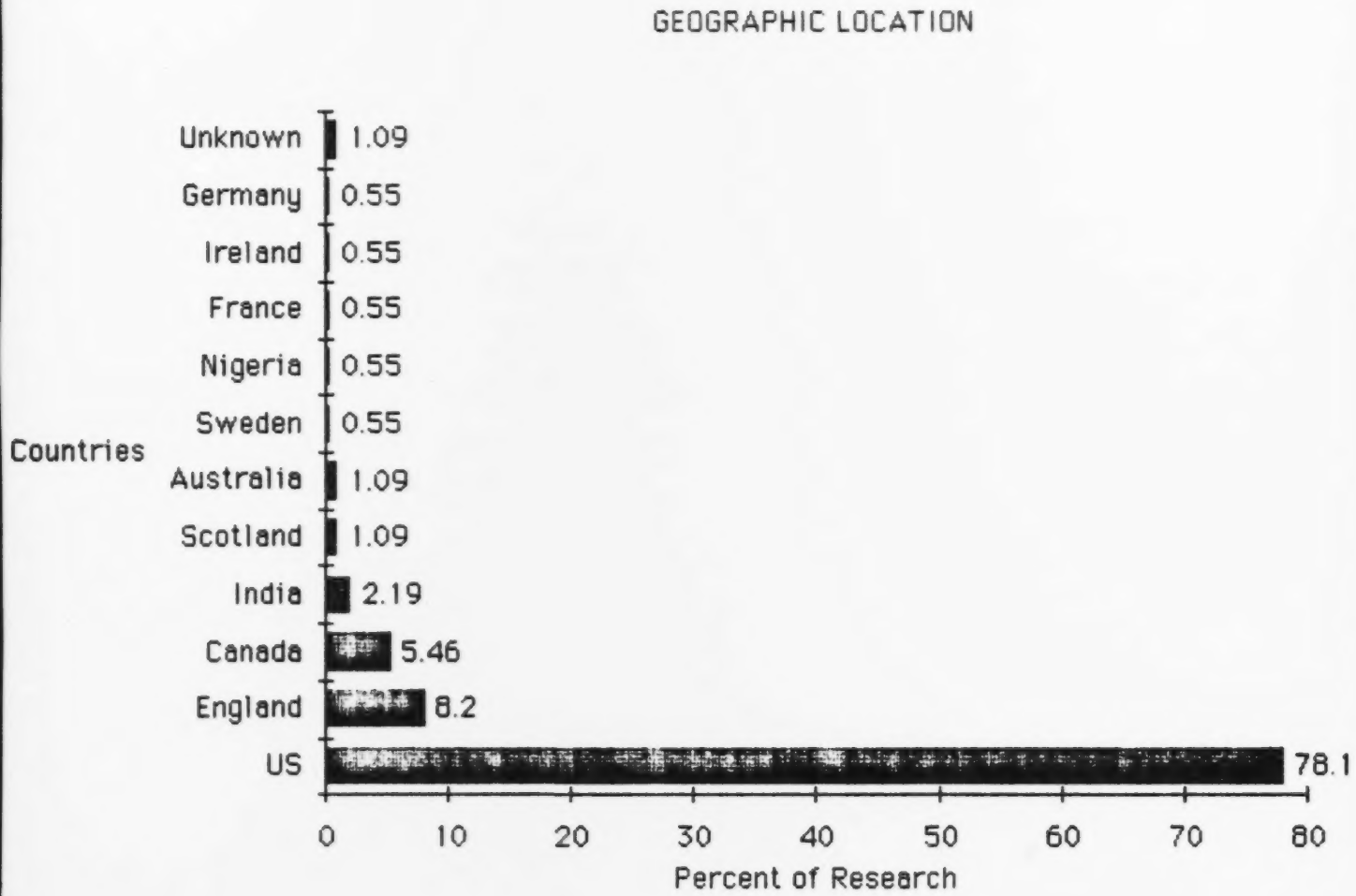

GEOGRAPHIC LOCATION
Countries
Unknown
Germany
Ireland
France
Nigeria
Sweden
Australia
Scotland
India
Canada
England
US
1.09
0.55
0.55
0.55
0.55
0.55
1.09
1.09
2.19
5.46
8.2
78.1
0
10
20
30
40
50
60
70
80
Percent of Research

Table 21

Authors by Library Affiliation

	NUMBER	PERCENT
PUBLIC	5	2.73
ACADEMIC	76	41.53
SCHOOL	7	3.83
SPECIAL	11	6.01
NON-LIBRARY	24	13.11
ACADEMIC/OTHER	14	7.65
LIBRARY SCHOOL	43	23.50
UNKNOWN	3	1.64
TOTAL	183	100.0

Figure 15

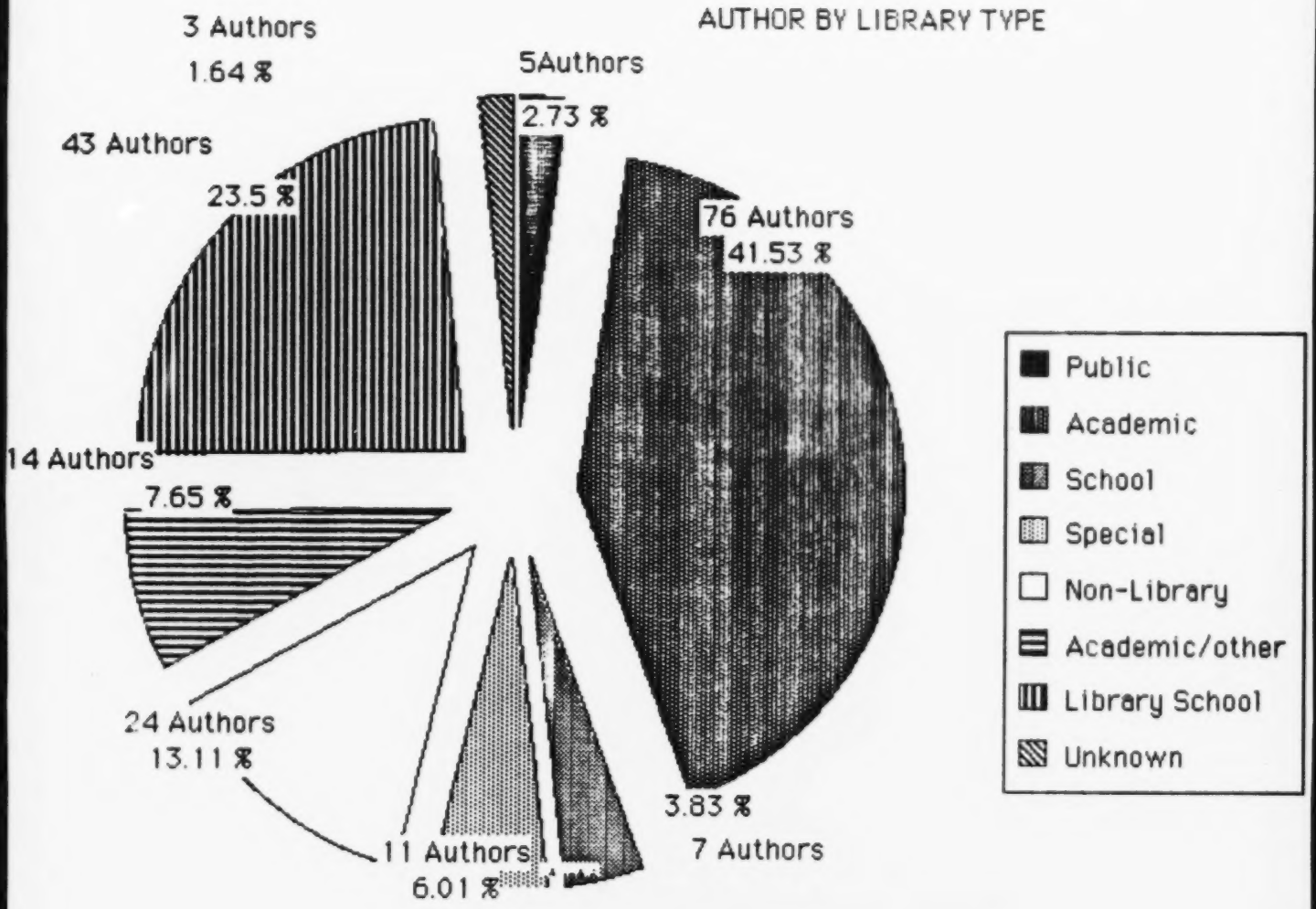

AUTHOR BY LIBRARY TYPE
3 Authors
1.64 %
5Authors
2.73 %
43 Authors
23.5 %
76 Authors
41.53 %
14 Authors
7.65 %
24 Authors
13.11 %
11 Authors
6.01 %
3.83 %
7 Authors
Public
Academic
School
Special
Non-Library
Academic/other
Library School
Unknown

Table 22

Alphabetical List of Library Affiliations

	School	Frequency
1.	Bayero University	1
2.	Columbia University	2
3.	Drexel University	2
4.	Ealing College of Higher Education	1
5.	Emporia State University	2
6.	Guru Nanak Dev University	1
7.	Louisiana State University	1
8.	Newcastle Upon the Tyne Polytechnic	1
9.	North Texas State University	2
10.	Queen's University	1
11.	SUNY at Buffalo	1
12.	South Australia Institute of Technology	1
13.	Syracuse University	1
14.	Texas Woman's University	1
15.	University of Alberta	1
16.	University of Burwan	1
17.	University of California, Berkeley	3
18.	University of California, Los Angeles	2
19.	University of Illinois	4
20.	University of Iowa	1
21.	University of North Carolina/Chapel Hill	1
22.	University of Pittsburgh	1
23.	University of Sheffield	5
24.	University of South Florida	1
25.	University of Strathclyde	1
26.	University of Texas at Austin	1
27.	University of Washington	1
28.	University of Western Ontario	2

Table 23

Frequency List of Library School Affiliation

Ranked by Frequency of Research

Rank	School	Frequency
1	University of Sheffield	5
2	University of Illinois	4
3	University of California, Berkeley	3
4	Columbia University	2
4	Drexel University	2
4	Emporia State University	2
4	North Texas State University	2
4	University of California, Los Angeles	2
4	University of Western Ontario	2
10	Bayero University	1
10	Ealing College of Higher Education	1
10	Guru Nanak Dev University	1
10	Newcastle Upon the Tyne Polytechnic	1
10	Louisiana State University	1
10	Queen's University	1
10	SUNY at Buffalo	1
10	South Australia Institute of Technology	1
10	Syracuse University	1
10	Texas Woman's University	1
10	University of Alberta	1
10	University of Burwan	1
10	University of Iowa	1
10	University of North Carolina at Chapel Hill	1
10	University of Pittsburgh	1
10	University of South Florida	1
10	University of Strathclyde	1
10	University of Texas at Austin	1
10	University of Washington	1

For each of the 43 authors affiliated with a school of library and/or information science, his or her institution was recorded. Tables 22 and 23 give this information alphabetically and by frequency.

Comparison of Results with Those of Earlier Studies

As can be seen in Table 24, the percentage of research articles in journals of library and information science grew steadily from 1950 to 1975, peaking at 35% in Peritz's 1975 sample year. The percentage research in the 1980, 1983, and 1984 samples was approximately 24 percent for all three years, consistently lower than the last year of Peritz's study.

This apparent decline may be due to cutbacks in funding for research in librarianship. However, comparisons between studies done by different researchers should be viewed with caution. Although all four studies used Peritz's definition of research, evidence suggests that the definition was not always interpreted in a uniform manner. Nour, for example, explictly stated that she did not consider case studies to be research (Nour, p. 15); the 1984 study did.

Changing core journal population may also have distorted comparisons. Table 25 indicates which 1984 core journals were included in earlier studies. In an effort to determine whether the larger 1984 core had affected results, core subgroups were created and analyzed. As Table 26 indicates, subgroups consisting of 1984 journals also used in earlier studies consistently showed a research percentage of approximately one third of all substantive articles, considerably higher than the percentage for

Table 24

Number of Articles and Percentage of Research for Given Years in the Core Library Journals

Year:	1950*	1960*	1965*	1970*	1975*	1980**	1983***	1984
# :	76	96	139	274	315	343	61	123
% :	8	11	15	30	35	24.4	24.4	23.6

*1950-1975 data from Bluma Cheila Peritz, "Research in Library Science as Reflected in the Core Journals of the Profession: A Quantitative Analysis (1950-1975)," (Ph.D. dissertation, University of California, Berkeley, 1977), p. 77.

**1980 data from Martyvonne Morton Nour, "Research in Librarianship: An Analysis of Research Articles in Core Library Journals of 1980." (Master's Thesis, University of N. Carolina at Chapel Hill, 1983), p. 31.

***1983 data from Gale Eaton, Robert Burgin, "An Analysis of the Research Articles Published in the Core Library and Information Science Journals of 1983," 1984, p. 24.

Table 25

Core Journals Used in Other Studies

Journal Number	Title	Peritz	Nour	Eaton & Burgin
01	American Archivist	X	X	X
02	American Libraries	X	X	X
03	ASIS		X	X
04	Art Libraries Journal			
05	ASLIB Proceedings	X		
06	Audiovisual Librarian			
07	Behavioral & Social Sci Libn		X	X
08	CLIC Quarterly			
09	Canadian Library Journal	X	X	X
10	Cataloging & Class Quar			
11	Catalogue and Index			X
12	Catholic Library World			X
13	Collection Building			
14	Collection Management			
15	College & Research Libraries	X	X	X
16	College & Research Lib News			
17	Colorado Libraries			
18	Database			X
19	Drexel Library Quarterly	X	X	X
20	Emergency Librarian			
21	Fontes Artis Musicae			
22	Government Pub Review		X	X
23	IFLA Journal	X	X	X
24	INSPEL	X		
25	Indexer, The	X		
26	Information Proc & Mngt	X	X	X
27	Information Technology & Lib		X	X
28	Interlending & Doc Supply			X
29	Internatl Cataloging			
30	Internatl Classification			X
31	Internatl Forum on Info/Doc			X
32	Internatl Library Review	X	X	X
33	Journal of Academic Libnship	X	X	X
34	Journal of Chem Info&Comp Sci	X		X
35	Journal of Documentation	X	X	X
36	Journal of Educ for Libnship	X	X	X
37	Journal of Info & Image Mgnt			
38	Journal of Info Science	X	X	X
39	Journal of Librarianship	X	X	X
40	Journal of Library History	X	X	X
41	Law Librarian			X
42	Law Library Journal	X	X	
43	Legal Ref Services Quart			
44	Library Acquisitions		X	X
45	Library & Archival Security			
46	Library & Info Science Research			
47	Library Association Record	X	X	X
48	Library Hi Tech			
49	Library History	X	X	X

Table 25

Core Journals Used in Other Studies

Journal Number	Title	Peritz	Nour	Eaton & Burgin
50	Library Journal	X	X	X
51	Library Quarterly	X	X	X
52	Library Resources & Tech Serv	X	X	X
53	Library Review			X
54	Library Technology Reports		X	
55	Library Trends	X	X	X
56	Libri	X	X	X
57	Medical Ref Services Quart			
58	Microform Review			
59	Music Library Assoc Notes			
60	New Library World			X
61	Ohio Media Spectrum			
62	Online		X	X
63	Online Review		X	X
64	Program			
65	Public Libraries			
66	Public Library Quarterly			
67	Publishers Weekly			
68	RQ	X	X	X
69	Reference Services Review			
70	Research Strategies			
71	Restaurator			
72	Rural Libraries			
73	SLA News			
74	Scandinavian Public Lib Quart			X
75	Scholarly Publishing	X	X	X
76	School Librarian			X
77	School Library Journal		X	X
78	School Library Media Quart	X	X	X
79	Science & Technology Libs			
80	Serials Librarian		X	X
81	Serials Review			
82	Show-Me Libraries			
83	Special Libraries	X	X	X
84	State Librarian			
85	Technicalities			
86	TOP of the News			
87	VOYA			
88	West Virginia Libraries			
89	Western Asso of Map Libns			
90	Wilson Library Bulletin	X	X	X
91	Women Lib Workers Journal			

Table 26

Research Percentages in 1984 Core Subgroups

Subgroups	Percentage Research Articles
Journals included in Peritz study	31.2
Journals included in Nour study	34.3
Journals included in Eaton/Burgin study	32.3
Journals included in all three earlier studies	33.3
1984 core excluding Publisher's Weekly	25.0
1984 core excluding state/regional publications	25.5
1984 core excluding state/regional publications and Publisher's Weekly	27.7

the entire 1984 core.

The 1984 data was manipulated in various ways in an attempt to explain the difference in percentages. Since none of the earlier studies had included weekly publications, Publisher's Weekly, the only weekly in the 1984 study, was excluded. State and regional publications, which have relatively few research articles, were not included in the Peritz or Nour studies and were therefore eliminated to remove their influence on the 1984 percentages. With the exclusion of weeklies and state and regional publications, the percentage research in 1984 rises to 27.7 percent, still below the 33.3 percent for journals included in all of the earlier studies. This suggests that library science research may be concentrated in a smaller core of journals than the 91 used in the most recent study.

Finally, Table 27 shows a breakdown of specific research methods used in different sample years. Trends are difficult to measure because categories were not used consistently across studies. It is possible to state that survey and experiment was the predominant research method observed in all four studies. However, use of other methods fluctuated. Bibliometrics declined from 13.1 percent of all research articles in 1983 to a low of 3.3 percent in 1984. In contrast, results indicated that use of historical methods had increased to 23.7 percent. Figures such as these must be interpreted with caution, but they are nevertheless valuable for following research trends over time.

Table 27

A Comparison of
Research Method Percentages for Given Years

Methodology	Percentage			
	1984	1983	1980	1950-75
Bibliometrics/ Descriptive Bibliography	3.3	13.1	11.2	7.5
Content Analysis	4.9	0.0	2.9	0.8
Surveys/ Experimental	28.4	59.1	41.5	37.5
Historical	23.7	3.3	7.3	18.1
Secondary Analysis	2.4	1.6	7.0	8.4
Non-Comparable Data	37.3	22.9	30.1	27.7

*data for 1983,1980, and 1950-75 taken from Gale Eaton and Robert Burgin, "An Analysis of the Research Articles Published in the Core Library and Information Science Journals of 1983," 1984, Table 5, p. 24.

CONCLUSIONS

Peritz observed in her 1977 study that the research literature of library science was "varied and multilateral in terms of both the methodologies used and the subjects treated" (Peritz, p. 169). This observation still holds true in 1984. Although there is a concentration on applied topics and a need for more theoretical research, the range of subjects and types of libraries studied is wide. However, there is room for growth in the sophistication of both the research methods and the analytical techniques employed by researchers in our field. Method is heavily concentrated in the historical, survey, and observation and description methods; descriptive analytical techniques predominate over techniques which are predictive or inferential.

Replication of analysis of research in library science over time will help our discipline to monitor its progress and to identify both subjects in need of further research and underutilized research methods and analytical techniques. We hope we have laid the groundwork for future replication by developing clear and easily-used categories and by creating simple forms for gathering data which can then be manipulated by computer. Library and information science research has a promising future. Careful analysis of this research can only enhance its growth.

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